



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,495	01/28/2002	Russell J. Sokac	D/A1144	2290

7590 11/18/2003
Patent Documentation Center
Xerox Corporation
Xerox Square 20th Floor
100 Clinton Ave. S.
Rochester, NY 14644

EXAMINER

LE, JOHN H

ART UNIT	PAPER NUMBER
----------	--------------

2863

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/056,495

Applicant(s)

SOKAC ET AL.

Examiner

John H Le

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,7-13,25 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7-10,12,13,25 and 27-32 is/are rejected.
- 7) ☒ Claim(s) 11 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Response to Amendment

1. This office action is in response to applicant's amendment received on 10/21/2003.

Claims 1, 5, and 25 have been amended.

Claims 4, 6, 14-24, and 26 have been cancelled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5, 7-10, 12-13, 25, and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen (USP 6,401,054) in view of Salazar (USP 5,130,710) and Baer et al. (USP 4,980,882).

Regarding claims 1-3, 7, 25, Andersen teaches a method of statistical analysis in an intelligent electronic device for data reduction and analysis, the method comprising: continuously monitoring a component as voltage sensors 32, current sensors 34; sensing a characteristic of the component (e.g. Col.2, lines 43-49); performing real time statistical calculations using sensed values of the characteristic of the component (e.g. Col.1, line 57-Col.2, line 12); and storing, in a memory, data including results of the calculations (e.g. Col.2, lines 53-57, Col.5, lines 42-51) indicative of a fault (e.g. Col.3, lines 29-40, Col.4, lines 36-40, Col.6, lines 10-15), providing for retrieval of the data (e.g. Col.1, lines 50-57, Col.6, lines 10-15), uploading the data to a main controller 44 at

regular intervals (e.g. Fig.1, Col.2, lines 62-67), for allowing retrieval of the results by service personnel (e.g. Col.3, lines 35-41).

Regarding claims 12 and 32, Andersen teaches the main controller 44 analyzes the data as necessary (Col.3, lines 18-41).

Regarding claims 13 and 27, Andersen teaches only data values outside of normal run limits would be recorded and studied (Col.3, lines 18-41).

Andersen fails to teach the component is an encoder and servo specifications of the encoder require a tolerance of $\pm 0.1\%$ to $\pm 5\%$.

Salazar teaches encoder 205 (Fig.8, Fig.13, Col.21, lines 22-38).

Regarding claim 5, Salazar teaches timing control 302 (Fig.13).

Regarding claims 8 and 28, Salazar teaches a serial control bus S0-S3 (Fig.5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a encoder 205, timing control 302 as taught by Salazar in a method of statistical analysis in an intelligent electronic device for data reduction and analysis of Andersen for the purpose of providing an improved electronic control for a plurality of d.c. motors (Salazar, Col.4, lines 50-55).

Baer et al. teach the servo specifications of the encoder within a tolerance of plus or minus 0.5 percent by a conventional speed-control servo system (Col.21, lines 34-54).

Regarding claims 10 and 30, Baer et al. teach incrementing an event count at a respective location when a data point falls into a range (e.g. Col.16, lines 7-9, Col.19, lines 12-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the servo specifications of the encoder within a tolerance of plus or minus 0.5 percent as taught by Baer et al. in a method of statistical analysis in an intelligent electronic device for data reduction and analysis of Andersen in view of Salazar for the purpose of providing a coarse servo detection method that responds only to radiation reflected from the coarse servo tracks, and that is insensitive to radiation reflected from other than the coarse servo tracks (Baer et al., Col.4, lines 39-43).

Allowable Subject Matter

4. Claims 11 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 11 and 31, none of the prior art of record teaches or suggests the combination of an intermittent aberrant component activity tracking, wherein the method comprising step of continuously monitoring a component, the component comprising an encoder, wherein servo specifications of the encoder require a tolerance of $\pm 0.1\%$ to $\pm 5\%$; sensing a characteristic of the component; performing real time statistical calculations using sensed values of the characteristic of the component; and storing, in a memory, data including results of the calculations indicative of a fault, wherein each data points is put into a range bucket, and the data are represented by a

Art Unit: 2863

counter rather a real encoder value. It is these limitations as they are claimed in the combination, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 26, none of the prior art of record teaches or suggests the combination of a real time encoder frequency excursion recording method that can record excursions in real time on a product printed wire board assembly (PWBA) in an operating environment, wherein the method comprising step of continuously monitoring the encoder timing, wherein servo specifications require a tolerance of $\pm 0.1\%$ to $\pm 5\%$; doing real time statistical calculations; and storing the results of the calculations indicative of a fault in a memory for retrieval by service personnel or for uploading to the main controller at regular intervals during the run process, wherein each data point is put into a range bucket and the data are represented by counter rather than real encoder value. It is these limitations as they are claimed in the combination, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Response to Arguments

5. Applicant's arguments filed 10/21/2003 have been fully considered but they are not persuasive.

-Applicant argues that the prior did not teach, "servo specifications require a tolerance of $\pm 0.1\%$ to $\pm 5\%$ ".

Art Unit: 2863

Baer et al. teach the servo specifications of the encoder within a tolerance of plus or minus 0.5 percent by a conventional speed-control servo system (Col.21, lines 34-54).

Conclusion

6. Specifically Baer et al. has been added to second ground of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H. Le whose telephone number is (703) 605-4361. The examiner can normally be reached on 9:00 - 5:30.

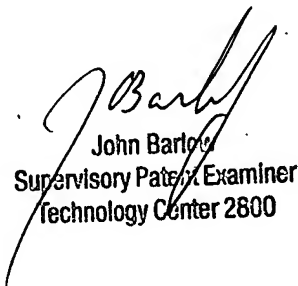
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on (703) 308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

John H. Le

Patent Examiner-Group 2863

November 7, 2003


John Barlow
Supervisory Patent Examiner
Technology Center 2800